

Attachment A

POE List

SECTION C – STATEMENT OF WORK

Attachment A – POE List provides detailed information on the 39 WHTI Land border POEs.

SECTION C – STATEMENT OF WORK

WMTI Implementation Sites - FINAL

FY05 Rank	Land Port Locations	POV FAX	POV FAX %	# Border Crossings	Total Vehicles/Lanes	# POV Vehicles/Lanes	WMTI / SENTINEL 2G Lanes	# Vehicles / Lanes
1	San Ysidro, CA	31,741,363	12.09%	1	24	20	4	24
2	El Paso, TX	28,608,705	11.71%	4	38	33	5	38
	BOTA (Bridge of the Americas)				14	14		14
	Paso del Norte				9	9		10
	Stanton Street				3		3	3
	Ysleta				12	10	2	12
3	Brownsville, TX	14,171,060	5.80%	4	17	16	1	17
	B&M Bridge				4	4		4
	Gateway Bridge				5	5		5
	Los Indios				4	4		4
	Veteran's Bridge				4	3	1	4
4	Laredo, TX	14,107,583	5.77%	3	20	19	1	19
	Columbia				4	4		4
	Convent Bridge 1				4	4		3
	Lincoln-Juarez- Bridge 2				12	11	1	12
5	Buffalo, NY	13,535,244	5.54%	4	39	33	6	34
	Lewiston				8	5	1	7
	Peace Bridge				11	9	2	11
	Rainbow Bridge				18	17	1	14
	Whirlpool Bridge				4	2	2	2
6	Hidalgo, TX	12,953,566	5.30%	2	16	15	1	17
	Hidalgo				12	11	1	13
	Pharr				4	4		4
7	Otay Mesa, CA	11,447,926	4.88%	1	13	12	1	12
8	Calexico, CA	11,282,530	4.81%	1	10	9	1	10
9	Detroit, MI	10,136,290	4.16%	2	21	17	4	20
	Ambassador Bridge				12	10	2	11
	Windsor Tunnel				9	7	2	9
	Nogales, AZ East				8		8	8
	Nogales, AZ West				4		4	4
11	Eagle Pass, TX	8,517,673	3.48%	2	10	10		11
	Eagle Pass, TX - Bridge 1				5	5		5
	Eagle Pass, TX - Bridge 2				5	5		6
12	Calexico East, CA	7,801,534	3.19%	1	8	8		8
13	San Luis, AZ	5,503,418	2.25%	1	6	6		6
	Pacific Highway				6		6	6
	Peace Arch				8		8	8
15	Douglas, AZ	4,408,880	1.80%	1	7	7		7
16	Port Huron, MI	4,121,872	1.69%	1	7	6	1	8
17	Del Rio, TX	4,032,369	1.65%	1	4	4		4
18	Champlain-Rouses Point, NY	2,873,208	1.18%	2	9	8	1	7
	Champlain				7	6	1	7
	Rouses Point				2	2		
19	Roma, TX	2,850,783	1.17%	1	4	4		4
20	Calais, ME	2,585,775	1.06%	1	2	1	1	2
21	Progreso, TX	2,413,725	0.99%	1	5	5		4
22	Rio Grande City, TX	2,216,312	0.91%	1	3	3		3
23	Massena, NY	1,908,107	0.78%	1	4	4		4
24	Tecate, CA	1,908,693	0.78%	1	2	2		2
25	Point Roberts, WA	1,865,326	0.76%	1	3	2	1	3
26	Sault Sainte Marie, MI	1,670,528	0.68%	1	3	2	1	4
27	Presidio, TX	1,630,347	0.67%	1	3	3		3
29	Andrade, CA	1,354,529	0.55%	1	2	2		

SECTION C – STATEMENT OF WORK

WHTI Implementation Sites - FINAL

FXIS Rank	Land Port Locations	POV PAX	POV PAX %	# Border Crossings	Total Inbound Lanes	# POV Inbound Lanes	NEXUS / SENTRI / 2C Lanes	# Installed Inbound LPRs
30	Derby Line, VT	1,274,164	0.52%	2	6	6		3
	Derby Line, VT I-81				4	4		3
	Derby Line, VT Rte 5				2	2		
31	Fabens, TX	1,242,617	0.51%	2	4	4		4
	Fabens, TX				2	2		2
	Fort Hancock, TX				2	2		2
32	Sumas, WA	1,241,057	0.51%	1	4	4		4
33	Lukeville, AZ	1,236,121	0.51%	1	3	3		3
34	International Falls/Ranier, MN	1,175,380	0.48%	2	3	2	1	2
	Ely, MN				1	1		
	International Falls, MN				2	1	1	2
35	Columbus, NM	1,123,601	0.46%	1	2	2		2
36	Madawaska, ME	1,116,033	0.46%	1	1	1		
37	Lynden, WA	983,187	0.40%	1	3	3		3
38	Highgate Springs/Alburt, VT	869,844	0.36%	2	7	6	1	5
	Alburt, VT				2	2		
	Highgate Springs, VT				5	4	1	5
39	Sweetgrass, MT	869,553	0.36%	1	3	2	1	3
	WHTI RPD POEs Total	232,137,086	95%	68	348	284	64	332
	National Total	244,393,263		164	466			341
42	Pembina, ND	777,651		1	6	5	1	4
43	Houlton, ME	713,064		1	6	5	1	3
	FLETC				3		3	3

Summary by Border

Land Port Locations	POV PAX	POV PAX %	# Border Crossings	Total Inbound Lanes	# POV Inbound Lanes	NEXUS / SENTRI / 2C Lanes	# Installed Inbound LPRs
Northern Border	52,957,199	21.67%	28	135	97	38	121
Southern Border	179,179,887	73.32%	34	213	187	26	211
WHTI RPD POEs Total	232,137,086	95%	68	348	284	64	332
National Total	244,393,263		164	466			341
Plus 2 POEs (NB) & FLETC	1,480,715	0.61%	2	15	10	5	10

Notes:

- All POV lanes at following POEs are 2C: 1 lane at Nogales East is SENTRI; 2 lanes at Buaine (1 each crossing) and 1 lane at Alexander's Bay are NEXUS.
- Some POEs have more crossing facilities than shown in the above table. In those cases only the main or listed crossing facilities are included.
- Total lane count derived from POE facility snapshots prepared by CSPO/CI/Asset Management.
- At Ports where the number of installed inbound LPRs is less than the Total Inbound Lanes, this may be the result of the construction of a new lane.
- At Ports where the number of installed inbound LPRs is greater than the Total Inbound Lanes,
 - a lane might be used as inbound and outbound,
 - a lane could be used as passenger and cargo, or
 - an inbound lane could be used only by emergency vehicles.
- The Federal Law Enforcement Training Center (FLETC) is not included in the national statistical totals.

Table prepared by Paul Howard, ViaTech Systems, Inc., WHTI PMO support staff.

Attachment B

License Plate Reader (LPR)

Requirements

Table of Contents

1.	INTRODUCTION.....	1
1.1	PROGRAM MANAGEMENT	2
1.2	HARDWARE/OTHER EQUIPMENT	2
1.3	SOFTWARE	2
1.4	SITE PREPARATION.....	2
1.5	LOGISTICS	3
1.6	INSTALLATION.....	3
1.7	STARTUP/TESTING/ACCEPTANCE	3
1.8	MODIFICATION	3
1.9	VERIFICATION	3
1.10	SYSTEM/COMPONENT INTEGRATION	3
1.11	TECHNICAL SUPPORT SERVICES	3
1.12	DOCUMENTATION.....	4
1.13	TRAINING	4
1.14	WARRANTY	4
1.15	MAINTENANCE	4
1.16	TEMPORARY REMOVAL OF LPR SYSTEMS.....	4
1.17	(b) (7)(E)	4
1.18	TRANSITION PLAN	5
2.	LPR SYSTEM PERFORMANCE REQUIREMENTS	5
2.1	POE PASSENGER LANES WITH LPR; POE PASSENGER WITHOUT LPR	5
2.2	ABILITY TO READ LICENSE PLATES OF MOVING VEHICLES	6
2.3	VEHICLE COUNTER SYSTEM (VCS).....	6
2.4	(b) (7)(E)	6
2.5	IMAGE AVAILABILITY AT THE INSPECTION BOOTH.....	6
2.6	IMAGE AVAILABILITY FOR THE CBP NETWORK	7
2.7	LICENSE PLATE LOCATION IDENTIFICATION CODES	7
3.	LPR SYSTEM TECHNICAL REQUIREMENTS	9
3.1	LANE EQUIPMENT	9
3.2	CONDUIT/WIRING	9
3.3	REUSE OF EXISTING CONDUIT/WIRING	9
3.4	ILLUMINATION	9
3.5	EQUIPMENT HOUSING.....	10
3.6	INTERFACE WITH OTHER CBP SYSTEMS	10
3.7	RETRO-REFLECTIVE AND NON-RETRO-REFLECTIVE PLATES	10
3.8	TECS INTERFACE REQUIREMENTS.....	10
3.9	READ CHARACTERS	10
3.10	DATA FORMATS	10
3.11	NO READ RESPONSE.....	11
3.12	NO PLATE RESPONSE.....	11
3.13	CBP NETWORK INTERFACE REQUIREMENTS	11
3.14	HARDWARE INTERFACE.....	11
3.15	LPR SYSTEM POWER REQUIREMENTS.....	11
3.16	CBP NETWORK INTERFACE SOFTWARE REQUIREMENT TESTING	11
3.17	TECHNOLOGY REFRESHMENT.....	11
3.18	APPLICABLE REGULATIONS AND STANDARDS REQUIREMENT	12
3.19	ELECTRICAL REQUIREMENTS	12
3.20	CONTROL DEVICES REQUIREMENTS	13

SECTION C – STATEMENT OF WORK

3.21	OPEN SYSTEM METHODOLOGY	13
3.22	MAINTENANCE REQUIREMENT	13
4.	SITE PREPARATION, CONSTRUCTION AND EQUIPMENT INSTALLATION REQUIREMENTS	13
4.1	EQUIPMENT SUPPORT STRUCTURES.....	13
4.2	LANE MARKINGS, SIGNAGE AND TRAFFIC CONTROL LIGHTS.....	13
4.3	SAFETY	14
4.4	INSTALLATION PROCESS REQUIREMENTS:	14
5.	SAFETY	14
5.1	ACCEPTANCE/PERFORMANCE TESTING	14
5.2	GENERAL ACCEPTANCE CRITERIA	14
5.3	FACTORY ACCEPTANCE TEST PLAN	15
5.4	FACTORY ACCEPTANCE TEST REPORT	15
5.5	ON-SITE PERFORMANCE TEST PLAN	15
5.6	LPR SYSTEM ACCEPTANCE TESTS	15
5.7	FINAL REPORT.....	16
6.	WARRANTY AND NON-WARRANTY MAINTENANCE	17
7.	LOGISTICS	17
7.1	CONFIGURATION MANAGEMENT PLAN.....	17
7.2	TRAINING	17
7.3	OPERATOR'S MANUALS	17
8.	SHIPPING INSTRUCTIONS	17
8.1	DELIVERY	17

Tables

TABLE 1. COUNTRY CODES	7
------------------------------	---

License Plate Reader (LPR) Requirements

1. Introduction

There are two LPR system types associated with the WHTI RFID SOW. For pricing purposes a complete LPR system installation shall encompass all necessary hardware, software, installation, interface, startup/testing/acceptance, system/component integration, documentation, training and warranty coverage as addressed in the WHTI SOW, on each applicable installation. The installation process for each type may vary, however, the system requirements are the same

The different types include:

1. **POE Vehicle Entry Lanes without Installed LPR System** – This configuration specifies new installations at a fixed, permanent installation at a CBP POE.
2. **POE Vehicle Entry Lanes with Installed LPR System** – This configuration specifies installation of a new LPR system at a fixed, permanent installation at a CBP POE or equivalent site that has already had LPR systems installed. The Offeror must remain within the LPR lane footprint at ports with installed LPRs. The lane footprint is the area bounded by the protective bollards/barriers constructed to protect the current LPR installations. The bollards/barriers currently in use must remain in place, and no new bollards, barriers, other structures or equipment may be placed outside of this existing footprint. There are no pre-set conditions on what can be done within the existing footprint, but CBP retains the right to reject any site design for valid operational, safety, or other reasons.

For each type of lane configuration the Offeror shall define a physical area within which the LPR system will be capable of reading both the front and rear license plates of any given vehicle.

When a vehicle is within this area the LPR system shall read the plate information and transmit a TECS query within .5 seconds. Also, when a vehicle is within this defined area, the Offeror shall also define the areas of the positioned vehicle that the LPR system will search for a license plate.

This will be the LPR system's field of view. For example, (b) (7)(E)

These subsections define specific tasks and requirements to be performed by the Offeror and stipulate performance standards for the LPRs, and associated systems, to fulfill this SOW. At the direction of the Contracting Officer, the Offeror shall be fully prepared to begin work following contract award without any further need to develop the products or capabilities required by this Attachment.

The major activities required for effective deployment of LPR systems at CBP sites consist of the following:

1.1 Program Management

The Offeror shall provide all personnel services, materials, facilities, equipment, and logistical support necessary to manage the accomplishments and documentation of the tasks specified in the SOW relative to the respective installation.

1.2 Hardware/Other Equipment

The contractor shall provide all hardware and other equipment necessary for the LPR system to operate correctly relative to the respective installation. The hardware platform integrated into the LPR system shall pass interoperability testing to assure that it does not interfere with the proper operation of systems already existing in the CBP operational environment. Changes to the LPR hardware environment shall be subjected to revalidation of their interoperability prior to certification for use as part of the deployable LPR system.

1.3 Software

The contractor shall provide all software required for proper operation of the LPR system to operate correctly relative to the respective installation. The software integrated into the LPR system shall pass interoperability testing to assure that it does not interfere with the proper operation of systems already existing in the CBP operational environment. Changes to the LPR software environment shall be subjected to revalidation of their interoperability prior to certification for use as part of the deployable LPR system.

1.4 Site Preparation

Site Survey – Collect site-specific information, identify specific local requirements, and provide an opportunity to establish initial deployment concepts for each location.

Design – Develop site infrastructure and LPR system design, from initial concept to final design. This includes holding meetings and providing information necessary for all local stakeholders to review final design concepts and achieve consensus on the overall approach recommended relative to the respective installation.

- For installation type, “POE Passenger Lanes with LPR System”, Offeror is required to provide modification to the existing designs and drawing and resubmit drawing for final approval.
- For installation type, “POE Passenger Lanes without LPR System”, CBP retains the right to determine what type of protective barrier (i.e., bollard, K-rail, etc.), if required, will be used.

Construction/Subcontracting – Prepare the sites/facilities to accommodate LPR system installations and operations, upon CBP request relative to the respective installation (see Attachment E, Installation Requirements, of the WHTI RFID SOW).

1.5 Logistics

Provide necessary logistics support to ensure that all work is done in the most efficient manner. This includes, but is not limited to, on-time delivery of equipment and timely availability of personnel to install equipment relative to the respective installation.

1.6 Installation

Install LPR systems at locations defined by CBP. The LPR system installations must conform to or be compatible with various site configurations, which may include other co-existing CBP systems. The LPR system shall encompass a software and hardware environment that implements a sufficiently open set of specifications for interfaces, services, and supporting formats to enable properly engineered components to be utilized across a wide range of systems with minimal changes, to interoperate with other components on local and remote systems, and to interact with users in a style that facilitates portability.

For installation type, "POE Passenger Lanes with LPR System", Offeror shall first remove the existing LPR system before proceeding. The Offeror shall be responsible for the removal and legal disposal of all debris related to the installation.

1.7 Startup/Testing/Acceptance

Perform the LPR system start up and adjustments, if needed, at each site, perform final acceptance testing, and, upon acceptance, transfer the system to CBP for sustained operation relative to the respective installation.

1.8 Modification

Make necessary site-specific modifications to ensure that the LPR systems function correctly at each location.

1.9 Verification

Verify that all site preparation, construction and installation work has been done according to specifications relative to the respective installation.

1.10 System/Component Integration

Ensure that LPR systems are fully integrated with each other and with all requisite CBP systems and networks relative to the respective installation.

1.11 Technical Support Services

Provide working solutions to maintain system operation and support CBP requirements for each location.

1.12 Documentation

Provide and update documentation including but not limited to Operator Training Manual and Maintenance Training Manual relative to the respective installation.

1.13 Training

At the conclusion of each installation, provide sufficient material and instruction to conduct operational training at each site. Training is for basic on-site hardware preventive maintenance as conducted by the site personnel, such as the local LAN administrator. This training is not intended to cover the actual operation of the software associated with interface to CBP systems.

1.14 Warranty

Provide warranty coverage, including on-site service if and when required for each location.

1.15 Maintenance

Develop a plan to provide post-warranty technical and operational maintenance support, if requested, for all LPR systems to include preventative maintenance and system upgrades at each location.

1.16 Temporary Removal of LPR Systems

This section specifies the temporary removal of an LPR system at any site that already has an LPR system installed. The Offeror must remove, without damage, an existing LPR system and prepare it for safe storage. Upon reinstallation, the Offeror must restore the LPR to fully functional status.

(b) (7) (E)

(b) (7)(E)

1.18 Transition Plan

The Offeror shall provide a transition plan for the start up, if necessary, and completion of this contract. The start up plan shall include, but not be limited to, implementing the existing installed LPR systems in the Offeror's overall scheme of the project and the preparation plan for sites that may be refreshed during this contract. The contract completion plan shall include, but not be limited to, the Offeror's plan to ensure a smooth and orderly transition from this contract to a new contract assuming a new successful Offeror. These plans should include planned documentation delivery and updates.

2. LPR System Performance Requirements

2.1 POE Passenger Lanes with LPR; POE Passenger without LPR

A 95% accuracy rate is required for all images with at least one license plate issued by any U.S. state, the District of Columbia, any Canadian Province or Territory, and Mexican states & district. Please refer to Section 2.7, License Plate Location Identification Codes, for a full list of these with the proper two-letter codes. For brevity, this requirement will be abbreviated throughout this Appendix as state/province of origin, but will always mean all of the 50 U.S., the District of Columbia, all of the 12 Canadian Provinces and Territories, and the 31 states and one district of Mexico.

An accurate read shall be where both the state/province of origin and all alphanumeric characters are correctly identified and transmitted. An "error" is construed as a missing or incorrect alphanumeric character or a missing or incorrect state/province of origin code where a license plate exists. An LPR read of No Plate-"NP" is not an error, and will not count against the required 95% accuracy, if in fact there are no existing plates on the vehicle or if the license plate is not in an area of the vehicle where it has been agreed the LPR system will look for a plate. An error will be reported if there is a plate that the LPR should have been able to read either at the front or the rear of the vehicle. There are no other exceptions to the requirement for a 95% accuracy.

Each installed LPR system shall correctly read the alphanumerics and recognize the state/province of origin of the license plate(s) of each passenger vehicle which passes through the lane and shall transmit the alphanumerics and the state/province of origin in a correctly formatted text query to the TECS system for at least 95% of all passenger vehicles which pass through the lane. Passenger vehicle includes, but is not limited to, cars, pick-up trucks, vans, SUVs and motorcycles.

2.2 Ability to Read License Plates of Moving Vehicles

All LPR system types shall have the ability to correctly read all images as identified in 2.1, POE Passenger Lanes with LPR; POE Passenger without LPR, of vehicles moving at speeds of up to (b) (7)(E).

2.3 Vehicle Counter System (VCS)

The VCS must operate from information provided by the LPR system. It is not intended to have the VCS as a separate, stand-alone system. The VCS will count all vehicles, regardless of the LPR system type, that pass through a lane with an installed LPR system and must have at least 99% accuracy. Although the information for the VCS must come from the LPR system, the software should be a separate system that can be configured for different operational needs. (b) (7)(E)

[REDACTED]

[REDACTED]

[REDACTED]

(b) (7)(E)

2.5 Image Availability at the Inspection Booth

It is required for the LPR system to have the ability to provide input for the display of all of the images captured (see section 2.4, Image Saving Capability Performance Requirement) by the system on a monitor at the inspection booth in real time. In addition the LPR system must also be

able to display the previous two vehicles, and all related images, immediately prior to the next vehicle being read.

2.6 Image Availability for the CBP Network

The LPR system shall have the ability to deliver real-time images of vehicles crossing at any lane with an installed LPR system to the CBP Network for a variety of uses. For example, CBP needs the ability to monitor real-time images of vehicles passing through LPR lanes from a remote location. (b) (7)(E)

2.7 License Plate Location Identification Codes

The following Table 1, Country Codes, lists the valid Two Letter Code Designations for the United States, Canada and Mexico.

Table 1. Country Codes

United States of America - US			
Alaska	AK	Montana	MT
Alabama	AL	North Carolina	NC
Arkansas	AR	North Dakota	ND
Arizona	AZ	Nebraska	NE
California	CA	New Hampshire	NH
Colorado	CO	New Jersey	NJ
Connecticut	CT	New Mexico	NM
District Of Columbia	DC	Nevada	NV
Delaware	DE	New York	NY
Florida	FL	Ohio	OH
Georgia	GA	Oklahoma	OK
Hawaii	HI	Oregon	OR
Iowa	IA	Pennsylvania	PA
Idaho	ID	Rhode Island	RI
Illinois	IL	South Carolina	SC
Indiana	IN	South Dakota	SD
Kansas	KS	Tennessee	TN
Kentucky	KY	Texas	TX

United States of America - US			
Louisiana	LA	Utah	UT
Massachusetts	MA	Virginia	VA
Maryland	MD	Vermont	VT
Maine	ME	Washington	WA
Michigan	MI	Wisconsin	WI
Minnesota	MN	West Virginia	WV
Missouri	MO	Wyoming	WY
Mississippi	MS		
Canada			
Alberta	AB	Northwest Territories	NT
British Columbia	BC	Nunavat	NU
Canada	CD	Ontario	ON
Manitoba	MB	Prince Edward Island	PE
New Brunswick	NB	Quebec	QC
Newfoundland And Labrador	NL	Saskatchewan	SK
Nova Scotia	NS	Yukon Territory	YT
Mexico			
Aguascalientes	AG	Mexico	MX
Baja California Norte	BA	Nayarit	NA
Baja California Sur	BJ	Nuevo Leon	NL
Campeche	CE	Qaxaca	OA
Chihuahua	CH	Puebla	PB
Chiapas	CI	Quintana Roo	QR
Colima	CL	Queretaro	QU
Coahuila	CU	Sinaloa	SI
Distrito Federal Mexico	DF	San Luis Potosi	SL
Durango	DO	Sonora	SO
Guerrero	GR	Tamaulipas	TA
Guanajuato	GU	Tabasco	TB

Mexico Continued			
Hidalgo	HL	Tlaxcala	TL
Jalisco	JL	Veracruz	VC
Michoacan	MC	Yucatan	YU
Morelos	MR	Zacatecas	ZA

3. LPR System Technical Requirements

3.1 Lane Equipment

The Offeror shall provide all lane equipment necessary for LPR system operation. This equipment must fit within the existing design of the LPR system installations at sites where LPRs are installed. All LPR lane equipment must be compatible with, and not interfere with the operation of, existing systems in the inspection area.

3.2 Conduit/Wiring

Unless otherwise directed by CBP, the Offeror shall provide all conduits and wiring required to make the LPR (and the VCS and (b) (7)(E) system operational. CBP retains the option to require that existing conduit and wiring be used, if practicable. All conduits and wiring shall meet all applicable codes and standards (National Electric Code (NEC), Facilities Standard for Public Building Service (PBS-100), other federal/state/local requirements, etc.). All conduits shall be installed at a minimum of (b) (7)(E) deep. If applicable codes or regulations at a particular site require a depth exceeding (b) (7)(E) the Offeror shall comply with the deepest requirement. All conduits shall be marked with magnetic marking tape and, when installed, shall be surrounded by at least (b) (7)(E) of Compacted Density Fill which has been dyed brick red.

3.3 Reuse of Existing Conduit/Wiring

CBP requires the reuse of existing conduit and wiring where practicable. However, any reused conduit or wiring must meet the requirements in 5.3, Factory Acceptance Test Plan. Existing conduit and wiring that does not meet the requirements of 5.3, Factory Acceptance Test Plan, shall not be used.

3.4 Illumination

Any illumination required for the operation of the LPR system cannot be visible to the traveling public and cannot in any way interfere with traffic flow or site operations nor pose a health or safety hazard when in operation. CBP retains the right to allow some level of visible light if it can be demonstrated that such light will not interfere with traffic flow or site operations nor pose a health or safety hazard when in operation. The Offeror should recognize that visible light will be a problem, especially at night, and only a level of visible light that is demonstrably safe will be allowed.

3.5 Equipment Housing

All LPR components, housing devices and junction boxes exposed to the weather shall be in weather- and tamper-resistant enclosures of at least NEMA Type 4. The enclosures shall be appropriately filtered and temperature controlled. The range of temperatures in which LPRs must function is from (b) (7)(E) degrees Fahrenheit.

3.6 Interface with Other CBP Systems

All LPR systems shall be capable of interfacing with other CBP systems and programs, including, but not limited to, the CBP Wide Area Network, CBP Local Area Networks, the Radiation Portal Monitors (RPM), the Automated Commercial Environment (ACE), all Dedicated Commuter Lane (DCL) systems, and existing LPR systems at POEs, such as the Perceptics Network Video Processors. Additionally, all LPR systems shall be capable of interfacing with future upgrades to any CBP system with minimal to no interruption during transition. The LPR system shall encompass a software and hardware environment that implements a sufficiently open set of specifications for interfaces, services, and supporting formats to enable properly engineered components to be utilized across a wide range of systems with minimal changes, to interoperate with other components on local and remote systems, and to interact with users in a style that facilitates portability.

3.7 Retro-Reflective and Non-Retro-Reflective Plates

The LPR system shall be capable of reading both Retro-reflective and non-Retro-reflective license plates.

3.8 TECS Interface Requirements

The TECS software has been modified to accept LPR system input. The LPR system shall use the formats in the subsequent paragraphs/sections to interface with TECS.

The Government shall supply the Offeror with the lane identifier information required for TECS queries prior to the LPR system installation. If any new TECS software modifications are identified, the Government shall inform the Offeror.

3.9 Read Characters

The LPR system shall image and recognize the alphanumeric characters, which uniquely identify each license plate, convert the image characters into ASCII characters, and format the alphanumeric data for input into TECS.

3.10 Data Formats

The LPR data packet information that is sent to TECS shall follow current established formats (see the TECS message formats as defined in the WHTI RFID Land SOW). In the future these formats may change. The Offeror will be required to work with CBP to ensure the continued

success of the LPR systems.

3.11 No Read Response

In the event that the system cannot confidently read a license plate within the captured image, it shall transmit special characters in the data packet formatted for TECS, currently the following "*** _" signifies "no read".

3.12 No Plate Response

In the event that the system cannot confidently locate either the front or rear license plates within the captured images, it shall transmit in the data packet formatted for TECS "NP" (state/province code) "NO PLATE" (character string) signifying "no plate."

3.13 CBP Network Interface Requirements

The Offeror products will be required to undergo testing to demonstrate network interface compatibility. Offerors may need to alter the network interface of the LPR device as CBP requirements change. The Offeror will be required to work with CBP to ensure the continued success of the LPR systems.

3.14 Hardware Interface

The LPR system shall interface with TECS and the CBP network by CAT 6 or fiber optic cable. The particular type of interface to be used will be determined by CBP on a site-by-site basis. All connectors and controls shall have their functions clearly labeled at both ends of any interface.

3.15 LPR System Power Requirements

The fixed, permanent LPR systems shall function as specified using 115 VAC (+ or – 10%), 50 – 60 Hz.

3.16 CBP Network Interface Software Requirement Testing

All software to be used by the Offeror for the LPR system shall be tested by CBP for the TECS application, network and security compatibilities at a CBP-designated site prior to installation or use. The Offeror shall develop procedures for all software to be tested by CBP, including on-site technical support and guidance during the testing.

3.17 Technology Refreshment

Given the pace of change in the marketplace for LPR systems, it is impossible to anticipate how the marketplace and individual CBP requirements will evolve over the life of the contract. The scope of this contract is meant to accommodate advances in technology to allow it to improve CBP mission accomplishment. Throughout the life of this contract, the Offeror is encouraged to seek ways to incorporate innovative and emerging technologies that will efficiently and economically improve License Plate Reading systems performance and improve CBP's mission

performance.

CBP may, at any time, acquire products or services from other sources and implement them into the CBP environment. Research, training, or other expenses, required to remain current in state-of-the-art is the responsibility of the Offeror.

If such an advancement is identified the Offeror shall submit an unsolicited proposal to the Contracting Officer. Any technology changes shall only be incorporated after a modification to the contract.

3.18 Applicable Regulations and Standards Requirement

The Offeror shall adhere to all documents and standards listed below. In the event that there is a discrepancy and/or contradiction to a standard/requirement, the Offeror shall notify CBP immediately for guidance prior to moving forward.

- American Society of Mechanical Engineers Standards www.asme.org
- American National Standards Institute (ANSI) www.ansi.org
- Occupational Safety and Health Administration (OSHA) www.osha.gov/comp-links.html
- Environmental Protection Agency (EPA) www.epa.gov
- CBP Security Handbook*
- CBP Passenger Systems Program Office System Development Lifecycle
- the Underwriters Laboratory (UL) www.ul.com
- the National Electric Code (NEC) www.nationalelectriccodes.net
- Facilities Standard for Public Building Service (PBS-100) www.gsa.gov/pbs/fps/fps.htm
- National Electric Manufacturers Association www.nema.org/stds
- Earned Value Management - The qualities and operating characteristics of EVM systems are described in American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA) Standard-748- A – 1998, *Earned Value Management Systems*. A copy of the standard is available from Global Engineering Documents (1-800-854-7179). Detailed CBP EVM requirements are provided in the WHTI FRID SOW.

* ~ The U.S. Customs and Border Protection documents will be made available for review in a designated reading room at CBP, please contact the CO to schedule appointments.

3.19 Electrical Requirements

All LPR components and parts shall meet all relevant electrical safety standards as established by the Underwriters Laboratory (UL), the National Electric Code (NEC), Facilities Standard for Public Building Service (PBS-100), and all appropriate state and local codes. The Offeror shall ensure and show that all components are designed to protect against shock hazard.

3.20 Control Devices Requirements

All LPR equipment and LPR related traffic flow control devices installed on or near a roadway must comply with all codes and regulations established by the agency or municipality that controls the roadway.

3.21 Open System Methodology

CBP requires that any LPR system implement Open System Methodology.

3.22 Maintenance Requirement

The Offeror will be responsible for any software maintenance and/or upgrades that are necessary to keep the LPR systems working properly and maintaining the 95% read accuracy.

4. Site Preparation, Construction and Equipment Installation Requirements

CBP retains the right to determine who will do site preparation and construction prior to the installation of the LPR equipment. The Offeror should be prepared to perform all site preparation and construction. However, if CBP designates other than the Offeror to perform site preparation and construction, the Offeror shall cooperate fully with this designee and provide specifications and technical support as needed.

The Offeror shall define any equipment installation or other work that may need to be performed only by the Offeror in order to correctly install the LPR system. CBP recognizes that there may be certain work that should be performed only by the Offeror to ensure proper system functioning and system warrant ability. The determination of who will be responsible for site preparation, construction and equipment installation, including that work which the Offeror has determined it must perform, will be made at the site conference which will follow the site survey for each site.

4.1 Equipment Support Structures

The Offeror shall provide all required support structures for installed LPR equipment, or, in the case where these are constructed by other than the Offeror, specifications for all required support structures.

4.2 Lane Markings, Signage and Traffic Control Lights

The successful use of LPRs at CBP facilities requires site-specific lane markings, signage and traffic control lights. The Offeror shall, as part of site installation, provide lane markings, signage and lights for traffic control. The Offeror shall ensure that all LPR signage is fully integrated with the WHTI RFID signage. The requirements for each site will be determined during the site survey and site conference, and will include coordination with other systems' existing or planned signage, lane markings and lights. This may also include painting protective

barriers to CBP specifications.

4.3 Safety

The safety of site personnel and the traveling public in and around the inspection lanes and the installed LPRs is of paramount importance to CBP. For new construction, at facilities without installed LPRs, the Offeror shall recommend protective barriers and other equipment that offers the highest degree of safety. For construction at sites with existing lane design, the Offeror shall recommend any changes that will increase safety. CBP retains the right to accept or reject the Offeror's recommendations.

4.4 Installation Process Requirements:

The Offeror will adhere to all installation process requirements in accordance with Attachment E, Installation Requirements, of the WHTI RFID SOW

5. Safety

The Offeror shall adhere to all safety requirements/regulations as set forth in Section 3, LPR System Technical Requirements.

5.1 Acceptance/Performance Testing

Acceptance testing of new deployments of approved compliant LPR Systems will commence upon site installation. Subsequent and/or simultaneous performance testing and evaluation may be required. If a change to an approved compliant LPR system is made those changes must be in accordance with Sections 1.2, Hardware/Other Equipment, 1.3, Software and 3.8, TECS Interface Requirements, of this Appendix.

5.2 General Acceptance Criteria

General quality measures, as set forth below, will be applied to each work product received from the Offeror as identified in this Appendix.

- Accuracy - Work products shall be accurate in presentation, technical content, and adherence to accepted elements of style.
- Clarity - Work products shall be clear and concise. Any/all diagrams shall be easy to understand and be relevant to the supporting narrative.
- Consistency to Requirements - All work products must satisfy the requirements of this SOW.
- File Editing - All text and diagrammatic files shall be editable by the Government.
- Format - Work products shall be submitted in hard copy (where applicable) and in media mutually agreed upon prior to submission. Hard copy formats shall follow any specified Directive(s) and/or Manual(s).

- Timeliness - Work products shall be submitted on or before the due date specified in the WHTI SOW or submitted in accordance with a later scheduled date determined by the Government.

5.3 Factory Acceptance Test Plan

The Offeror shall provide CBP with a Factory Acceptance Test Plan. This plan shall be carried out prior to the LPR equipment being shipped to the site. The plan shall document factory acceptance procedures, facilities and equipment used. The Offeror is responsible for making sure that all necessary tests are performed to ensure that the LPR system and associated components are operating in compliance with all system and performance requirements specified in this Appendix to the WHTI RFID SOW. This test plan is due at the time of proposal.

5.4 Factory Acceptance Test Report

Upon the completion of the Factory Acceptance Test (FAT), the Offeror is responsible for maintaining these records for immediate disclosure to the Government upon request.

5.5 On-Site Performance Test Plan

The Offeror shall provide CBP with a Contractor's On-site Performance Test Plan. This plan shall outline/describe the Offeror's field test procedures and data collection plans, as it relates to testing all equipment on-site after it has been installed. The test plan shall:

- Define any special test equipment required;
- Provide an estimate of the amount of time required;
- Identify any site or CBP assistance that may be required;
- Define, in sufficient detail, the documents that will be utilized in establishing the installed LPR equipment system performance, to include an acceptance checklist;
- Identify the Offeror's analysis techniques of the data and its format for submission to CBP.
- This plan is due at the time of proposal.

5.6 LPR System Acceptance Tests

Prior to acceptance review of an "LPR System" by CBP, but after the Offeror has verified that all site preparation and installation construction has been done according to all applicable codes and the contract specifications, the Offeror will test each system to demonstrate that it meets the performance requirements.

For all LPR systems the Offeror will record 100 consecutively arriving vehicles. For all systems this recording will include images of both the front and rear field of view of each vehicle.

The Offeror will verify if a license plate read was correct or incorrect by comparing the images

to what the LPR system plate read. The only exception allowed will be if there is no plate on the vehicle or if the plate does not fall within the predetermined “field of view” of the respective type of “LPR System” cameras. This is the only exception to the accuracy performance requirement, and such vehicles will not be included in any accuracy calculations.

When a satisfactory test has been completed, the Offeror will tabulate the results, showing site, lane number, date and time of testing, the license plate numbers of all vehicles recorded, and the results for each plate. This tabulation will be presented to CBP as proof of acceptable performance. The Offeror will also include the actual images and the LPR reads used for the testing. CBP will have 10 business days from date of receipt to examine these results.

If the initial testing is unsatisfactory, the Offeror will determine what caused the unsatisfactory results, make any necessary adjustments, and re-test the lane(s). Re-testing will follow the same procedure as initial testing.

CBP will verify all data received by the Offeror prior to official acceptance approval. Final acceptance of all work performed, reports and other deliverables will be determined upon CBP COTR’s review and approval.

VCS acceptance testing shall be done only after a lane has had its LPR system accepted by CBP. The VCS will be tested by recording the traffic for at least .5 hours. The number of vehicles shall be manually counted and then compared to the results shown by the VCS. If the results are satisfactory, the Offeror will present a full report from the VCS showing the test period, the recording of the vehicles that passed during the test period, and a statement that the VCS recorded traffic to at least 99% accuracy. CBP shall have 10 days to examine these results.

If the initial testing is unsatisfactory, the Offeror will determine what caused the unsatisfactory results, make any necessary adjustments, and re-test the lane(s). Re-testing will follow the same procedure as initial testing.

(b) (7)(E)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5.7 Final Report

The Offeror shall provide a final report, to the COTR, at the conclusion of each installation effort. The report will summarize objectives achieved, significant issues, problems and recommendations to improve the process in the future. This report is due within 10 business days of installation completion.

6. Warranty and Non-Warranty Maintenance

The Offeror shall comply with the warranty and non-warranty maintenance identified in the WHTI RFID SOW.

7. Logistics

7.1 Configuration Management Plan

The Offeror shall comply with the configuration management and change management requirements identified in the WHTI RFID SOW.

7.2 Training

The Offeror is responsible for providing training to the staff at the installation location that will be using "LPR Systems", (i.e., CBP Officer, etc.). The training and related training materials shall focus on the routine care and maintenance of the installed hardware.

The Offeror is additionally responsible for providing the CBP Office of Information and Technology Training Branch with the initial training on the LPR systems to the satisfaction that training aids and material can be developed.

7.3 Operator's Manuals

Upon installation the Offeror shall deliver 1, commercial grade quality, copy of the Operator's Manual to each CBP site in which LPRs have been installed. The Operator's Manual shall contain an overview of the systems step-by-step procedures for all normal and emergency procedures. The manual will be used to provide non-technically oriented operators an understanding of equipment operations.

CBP will be allowed to reproduce copies from the electronic version of the Operator's Manual, and distribute copies within the organization. The Offeror shall provide updates to the electronic version with the next monthly status report following the update to keep the information in the Manual current.

The Offeror shall comply with the delivery of Operator's Manuals as stated in the WHTI RFID Land SOW.

8. Shipping Instructions

8.1 Delivery

Delivery for this requirement shall be F.O.B. Destination in accordance with FAR 52.212-4 (j) (2) Risk of Loss.